

2018 Annual Plan and 5-Year Plan

**Administrative Order on Consent
Regarding Impacts Relating to
Wastewater Facilities Comprising the Closed-Loop System**

**Colstrip Steam Electric Station
October 3, 2018**

Background

On August 3, 2012, PPL Montana and Montana Department of Environmental Quality (MDEQ) entered into an Administrative Order on Consent to address groundwater seepage from wastewater facilities at the Colstrip Steam Electric Station. Under Section X of this Order, PPL Montana (Talen Montana) is obligated to submit for MDEQ review and approval annually an Annual and 5-Year Plan. The following document provides the 2018 Annual and 5-Year Plan under this Order.

AOC Related to Wastewater Facilities at Colstrip

2018 Annual Plan – provide a status of activities underway and detailed schedule for scope of work for projects in current year, including a schedule of completion of Site Reports.

Activities specifically identified in the AOC. Note that timely review of the work plans and reports identified below help maintain this schedule, but it is understood that each activity may require additional time for review and to address comments before it can be approved. The approval of precedent activities could affect the dates of submittal of subsequent activities. A Gantt chart is attached that identifies the planned schedule for AOC required activities.

- Submit Revised Plantsite Remedy Evaluation Report to MDEQ by 6/11/18.
- Submit revised 1&2 STEP Cleanup Criteria/Risk Assessment (CCRA) Report to MDEQ by 6/11/18.
- Submit proposed 2018 Annual Plan and 5-Year Plan to MDEQ for review. Target 6/15/18.
- Provide updated Financial Assurance of \$8.345m by 7/1/18.
- Conduct 2018 Annual Meeting with MDEQ, finalize Annual & 5-year plans. Target 8/22/18.
- Received conditional approval for Revised Plantsite Remedy Evaluation Report from MDEQ on 8/2/18.
- Received comments from MDEQ on 8/2/18 on the 1&2 STEP CCRA Report requesting additional sampling & analysis in regards to radium.
- Received comments from MDEQ on 8/2/18 on the 1&2 SOEP/STEP Remedy Evaluation Report requesting additional work to address Potential Cleanup Criteria (PCC) at the Point of Compliance (POC).
- Complete additional radium sampling & analysis and review with MDEQ by 10/15/18.
- Submit Revised Plantsite CCRA to MDEQ by 10/31/18.
- Submit Revised 1&2 STEP CCRA to MDEQ by 10/31/18.
- Submit 3&4 EHP Cleanup Criteria (CC) & Risk Assessment (RA) Report to MDEQ by 11/15/18.
- Submit 3&4 EHP Remedy Evaluation Report to MDEQ by 11/15/18.
- Schedule a meeting with MDEQ to discuss response to MDEQ's comments on the 1&2 SOEP/STEP Remedy Evaluation Report by 11/30/18.
- Submit Revised 1&2 SOEP/STEP Remedy Evaluation Report to MDEQ by 12/31/18.
- Submit Plantsite Remedial Design/Remedial Action Work Plan to MDEQ by 3/1/19.

The following activities are activities not specifically identified in the AOC or are interim response actions for the 2018 annual plan period. While the AOC provides for work to be done as an interim response action, the examples provided in the AOC are not exhaustive, and the prompt action described below is to respond to circumstances that will be identified in the respective work plans and not because of an acute threat to human health or a recent spill.

- Submit 1116D/1117D Area Follow-up Work Plan by 7/11/18.
- Submit 2018 Armells Creek Synoptic Run Report to MDEQ by 7/16/18.
- Complete soil sampling at 3&4 EHP Area historic release sites by 9/1/18.
- Submit 1&2 A Pond/1&2 STEP A Cell Dewatering Evaluation Report by 9/15/18.

- Address North STEP Main Dam Area Investigation recommendations by 9/20/18.
- Complete 169M conversion by 7/31/18. Submit report to MDEQ by 10/1/18.
- Conduct CCR Rule assessment monitoring evaluation by 10/15/18.
- BCSDA well replacement/installation by 10/19/18.
- Complete 648D Area Evaluation follow-up by 11/16/18.
- Complete 1108D/1167D Area Evaluation follow-up by 11/16/18.
- Construct 3&4 EHP Pond Return Water Brine Concentrator Solids Disposal Area in 2018.
- Complete conversion/installation of capture wells near 2067A and submit report to MDEQ by 12/31/18.
- 3&4 Bottom Ash Dewatering System operational by 12/31/18.
- Complete CCR Rule annual groundwater monitoring report by January 2019.
- Conduct annual vegetation study for SOEP/STEP/EHP areas and submit report by 4/1/19.
- Complete 615D/SP-15 Investigation by 6/7/19.

2018 5-Year Plan – provide a projection of long-term schedules for actions related to Article VI Investigation and Remediation

- Submit proposed Annual Plan & 5-Year Plans to MDEQ by 6/1 of each year.
- Conduct Annual Meeting with MDEQ by 7/15 of each year.
- Submit with each Annual Plan a proposed revision, as needed, to the Financial Assurance that has been established for ongoing obligations under the AOC including monitoring.
- Provide financial assurance for each area after the Facility Closure Plan and Remedy Evaluation has been approved by MDEQ.
- Other subsequent plans identified in the AOC will likely occur in the 2018 – 2020 time frame but are dependent upon approval of the plans identified above and will be included in future annual and 5-year plans as they become better defined.

Other activities that are planned for the 5-year period but not specifically identified in the AOC are identified below. Note that the proposed schedules are based on current conditions and subject to change because of unanticipated changes in pond conditions, CCR regulations, or approved budgets.

- Submit Annual Water Monitoring Reports by 4/15 of each year.
 - o This time frame allows adequate time for testing, analysis and data evaluation, which cannot reasonably be completed sooner than this date each year. When weather and other variables allow for a consolidation of this schedule without compromising the report's integrity, Talen Montana will submit this report earlier than the date above.
- Conduct annual pond embankment inspections by a qualified professional engineer. (CCR Rule)
- Conduct annual EAP review with local emergency responders. (CCR Rule)
- Conduct independent Dam Structural Stability Assessment every 5 years. (CCR Rule)
- Conduct Dam Safety Factor Assessment every 5 years. (CCR Rule)
- Continue with dewatering efforts at the ash impoundments including forced evaporation.
- Demonstration of compliance with CCR Rule Location Restrictions by 10/17/18.
- Construct closure and liner system in the 3&4 EHP G Cell in 2019. (CCR Rule)
- Install a cap and close the 1&2 A Pond in 2019.

- Install a cap and close the 3&4 Bottom Ash Pond in 2019. (CCR Rule)
- Install a cap and close the 3&4 EHP B Cell in 2020. (CCR Rule)
- Install a cap and close the 1&2 STEP A Cell in 2020.
- Construct a 1&2 Capture Well Storage Pond in 2021.
- Construct Dry Disposal System for 3&4 EHP in 2021.
- Construct Paste Plant Bypass Dewatering System for 3&4 EHP in 2021.
- Units 1&2 cease operation no later than July 1, 2022.
- Submit 1&2 Decommissioning Plan to MDEQ no later than 3 months after operation ceases.
- Install a cap and close the 1&2 STEP Old Clearwell in 2022.
- Install a cap and close the 1&2 STEP E Cell in 2022.
- Install a cap and close the 1&2 Bottom Ash Pond in 2022.
- Complete construction of the Plantsite/1&2 Capture Well Treatment System in 2022.
- Construct the Plantsite/1&2 Capture Well Treatment System Solids Disposal area in 2022.

Financial Assurance Plan – provides for the first and second phase (addressing obligations for current and continuing remedial actions including monitoring)

Annual Activities

- Plantsite Groundwater Monitoring activities, \$175,000
- 1&2 Groundwater Monitoring activities, \$125,000
- 3&4 Groundwater Monitoring activities, \$175,000
- Plantsite Groundwater Remediation O&M, \$150,000
- 1&2 STEP Groundwater Remediation O&M, \$115,000
- 3&4 EHP Groundwater Remediation O&M, \$120,000
- 3&4 EHP 12d Stipulation Monitoring activities, \$150,000
- East Fork Armells Creek Synoptic Run, \$25,000
- Pond-related Vegetation Studies, \$30,000
- Forced Evaporation System O&M, \$300,000 (expected to end after 2019)
- Collection System Water Treatment O&M, \$300,000

Second phase Article VI obligations to complete

- Plantsite Remedy Evaluation and Selection - \$100,000
- 1&2 SOEP/STEP CCRA, Remedy Evaluation and Selection - \$250,000
- 3&4 EHP CCRA, Remedy Evaluation and Selection - \$570,000

These phases of financial assurance cover 5 years of current and continuing remedial actions including monitoring. The third phase will provide financial assurance to address the Facility Closure Plan and the Remedy Evaluation. This third phase financial assurance is to be provided after MDEQ approves the Facility Closure Plan and the Remedy Evaluation.

Talen Montana has provided DEQ with a Liberty Mutual Insurance Company Surety Bond for \$7.5 million to cover current obligations as identified. This amount will be increased to \$8.345 million by 7/1/18 per MDEQ's review of the AOC 5-year comprehensive financial assurance review completed in December 2017.